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ABSTRACT

This paper assesses the present state of training, licensing, and certification of early childhood personnel in Pennsylvania. Assessment is based on assumptions requiring conceptualization of (1) certification based on competency or performance, (2) education and training that includes both formal and informal experiences, and (3) planning and evaluation that is centered around the community as well as around an institution or agency. The analysis suggests a confusing and probably unjustifiable multiplicity or requirements and supervising agencies. The requirements were felt to provide insufficient flexibility for (1) vertical and horizontal mobility of personnel; (2) adaptation to a particular employment level, a particular clientele population, and the facility or institution of employment; (3) adaptation for individual differences in personnel; or (4) input from communities. Further, the paper indicates that existing personnel requirements were not based on performance criteria, employment success, or changing times. An alternative competency-based certification procedure is proposed. Guidelines are provided for determining appropriate and relevant competency sources and curricula domains for all levels of training and certification. The schematic framework for developing a total system is also included. (CS)

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INSTITUTE FOR THE STUDY OF HUMAN DEVELOPMENT

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THE TRAINING AND CERTIFICATION OF EARLY CHILDHOOD PERSONNEL

A Position Paper

BY DONALD L. PETERS AND MARGARET MCNICHOL

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THE TRAINING AND CERTIFICATION OF EARLY CHILDHOOD PERSONNEL

A Position Paper

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INTRODUCTION

This paper is directed to those concerned with the planning and supervising of training and certification of early childhood personnel. It represents one assessment of the present state of training, licensing, and certification in the Commonwealth of Pennsylvania and one set of alternatives which might be considered in the formulation of future plans. The analysis is, at best, sketchy, but it is designed to suggest desirable directions for future efforts.

Throughout, several major assumptions have been made. These might be summarized as follows:

1. The certification and training of personnel are inseparable concerns. No useful analysis may be made of one without consideration of the other.
2. All personnel involved with the instructional and/or custodial care of children from birth to approximately 10 years of age constitute a coherent unit of the human service work force rather than a loose collection of separate units with disparate training and qualification needs.
3. Prior to certification early childhood personnel should be able to demonstrate the functions that they are expected to perform after certification.

4. A training program for early childhood personnel must be personally relevant to the trainees involved and should be flexible enough to accommodate individual differences in experience, style, learning rate, and objectives.
5. A training program for early childhood personnel must prepare prospective workers for both horizontal mobility (across social and institutional settings) and vertical mobility (movement to ever greater levels of training, prestige, and responsibility).
6. A training program for early childhood personnel and the certified staff it produces, must be responsive to the needs of the community served.

These assumptions require a conceptualization of: (a) certification based on competency or performance, (b) education and training that includes both formal and informal experiences, and (c) planning and evaluation that is centered around the community as well as around an institution or agency.

The remainder of this paper provides a summary of the current state of affairs, an analysis of the shortcomings seen, suggested alternatives, and recommended changes.

EXISTING CERTIFICATION REQUIREMENTS

At this time in the Commonwealth of Pennsylvania, as well as in most of the nation, no unified set of regulations exists for the certification and/or licensing of personnel working with young children.

Current regulations place certification and the supervision of training in the hands of a variety of state agencies and institutions. Actual training is accomplished in a variety of settings (including work settings, community colleges, colleges and universities), each following the rough guidelines of one or more agencies and elaborating on the guidelines according to their own inclinations. The state agency jurisdiction is, to some degree, determined by whether the services provided are construed as primarily instructional or primarily custodial in nature. The standards set vary from agency to agency, from facility to facility, and from educational institution to educational institution. Classification of early childhood personnel, and the labels provided for them, also differ widely, even though all such personnel are in daily contact with children ranging in age from infancy to 10 years.

The facilities employing early childhood personnel include public schools, private schools, general child care institutions, state hospitals, day care centers and day care homes, to name only the major ones.

Within these facilities personnel may be considered as falling into one of two major categories: professional staff or paraprofessional staff. Professional personnel are generally defined as those independently responsible for the instruction, planning, and supervision of daily activities of a group of children. Paraprofessional staff are those who assist professional workers but remain under their direct supervision.

Within these multiple settings the standards or requirements for those professional and paraprofessional personnel permitted to care for children may be summarized as follows:

1. Public Schools: Professional. A baccalaureate degree is required and post-graduate study is necessary for attainment of full status. The curriculum of programs of training must be approved by state authorities, and all persons completing the institutional requirements are considered certifiable. Paraprofessional. A high school diploma. Training programs must be approved by the state authority, though completion of a training program is not required for employment at entry levels.
2. Private Schools: Professional. A baccalaureate degree from an approved early childhood education program or a baccalaureate degree and the completion of 18 credit hours of approved early childhood coursework. Paraprofessional. A high school diploma.
3. General Child Care Institution: Professional. Applies generally only to such specialists as social workers, psychologists, psychiatrists, etc., who are not generally responsible for the daily care of children. Paraprofessional. Primarily a "house parent." A high school diploma.
4. State Hospital: Professional. A baccalaureate degree plus successful completion of centralized civil service examination. Paraprofessional. A variety of positions require a high school diploma plus successful completion of a training program offered by the employing institution.
5. Day Care A: Professional. A baccaulareate degree and/or experience and training in child care and development. Paraprofessional. A high school diploma.

6. Day Care B: Professional. Some college and/or experience in child care and development. Paraprofessional. Less than a high school diploma is permissable.

The specified requirements focus upon the educational background of the person, and considerations of the specification of the content of that background or his experience is left uncertain. No consideration is given to the prospective worker's performance competency. Further, it is clear that a wide range of levels of education are acceptable depending upon the facility and/or agency involved (see Table 1).

SHORTCOMINGS IN EXISTING CERTIFICATION REQUIREMENTS

There are many shortcomings in the present situation, and several of the major ones are worth noting here.

First, the multiplicity of requirements and supervising agencies is confusing and probably unjustifiable. The interactions between children and adults in any of the facilities and settings suggested by the regulations have a great deal of commonality. No matter what the circumstances or intentions, the adults in every setting play a variety of roles in meeting children's needs. Katz (1970b), for example, suggests three broad role definitions: the instructional role, the maternal role, and the therapeutic role. These roles might be conceptualized as meeting the child's needs for information, security and socialization, and good mental health. They cut across all settings and are an inherent part of child/adult relations. Only the priority or degree of emphasis changes with the setting.

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TABLE 1

SUMMARY OF EDUCATION REQUIREMENTS OF VARIOUS EARLY CHILDHOOD PERSONNEL

	Public School	Private Academic	General Child Care Institutions	State Hospitals	Day Care (A)	Day Care (B)
PROFESSIONAL						
Masters	Teacher Instructional III			Special Education II		
B.A. + Experience	Teacher Instructional II					
B.A.	Teacher Instructional I	Teacher		Special Education I	Teacher (Child Day Care Worker II)	
Less than B.A.						Director
PARAPROFESSIONAL						
2 yrs. College	Instructional Aide IV Instructional Aide III	Assistant Teacher		Child Care Aide III	Assistant Teacher (Child Day Care Worker I)	Assistant Director
Some College	Instructional Aide II Instructional Aide I					
High School	Entry Level (noninstructional)	Aide	Child Care Worker	Child Care Aide II Child Care Aide I Child Care Trainee	Child Welfare Aide	Group Supervisor Asst. Group Supervisor
Less than High School						Aide

Second, the educational requirements for all levels of personnel are clearly stated and rather strict. For example, to teach in a public school a baccalaureate degree is required, but it only displays a satisfactory completion of X number of credit hours in specifically defined subject matter. The strict adherence to such standards may have several major effects. It may exclude personnel who, through other experiences, have a high degree of competency for performing the required work. It may prevent the vertical mobility of competent personnel, and therefore, keep them from assuming greater levels of responsibility for which they may be qualified, as well as deprive them of the associated social and financial compensation. It may prevent the horizontal movement of personnel from one kind of facility or setting to another where major personnel shortages may exist. All three problems place constraints on a community's abilities to meet its needs for human service manpower.

Third, the differences reflected in the requirements are arbitrary and do not reflect the specific requirements of: a) a particular employment level, b) a particular clientele population, and c) the facility or institution of employment. The generic, generally imposed criteria fail to recognize the multiple differences always found between two positions with the same job title, but in different size facilities in different locales.

Fourth, the present regulations allow little room for individual differences among personnel. Not only are employment roles always assumed to be the same, but apparently so are the prospective persons to fill those roles. Such assumptions tend to enforce a homogeneous selection of personnel. In a pluralistic society, and in a society where at least

lip-service is given to the desirability of differences and the value of multi-cultural, multi-ethnic backgrounds, such a practice seems questionable. This unfortunate circumstance is carried to its extreme when all perspective teachers or case workers are required to "lock-step march" through identical curricula with no flexibility as to what is to be studied or when. In such circumstances the only differences among personnel that can arise or count are those of "more or less," i.e., A or D students.

Fifth, many of the requirements imposed may be irrelevant to the student and his performance in future work. Many first-year teachers have complained that their training institutions have not adequately prepared them for their actual classroom experience. They have voiced annoyance at the methods courses which offered little or no practical information.

Sixth, the requirements set by state agencies do not reflect the desires of communities for the type and qualifications of personnel needed in their institutions. Again, in a pluralistic society it seems desirable for the communities that are to be served to have some voice in establishing the definition of the training and certification of personnel.

Seventh, the requirements set forth bear no relationship to successful performance on the job. Academic accreditation is at best backward looking. The student has had course X; hence he could at one time (two years ago?) perform a, b, and c. There is no guarantee that he can perform them now, if he ever could. In addition, there is little or no effort made to determine what skills should be crucial to certification and who should determine whether the crucial skills have been attained.

Eighth, the regulations fail to recognize adequately that certification may change with time and that preparation is a career-long continuing

process. Not only do employment situations change, but people change. Continuous or recurrent appraisal may be necessary.

AN ALTERNATIVE SYSTEM

The shortcomings of the present system suggest it is indeed necessary to reorganize both the means of certifying and the means of training early childhood personnel. The alternative suggested here involves a competency-based certification procedure fashioned after the ComField model of the Northwest Regional Educational Laboratory (Schalock & Hale, 1969). The intent is not to present details of either the "certification schema" or the training components designed to prepare personnel for certification. The ComField report presents details pertinent to the education of elementary school personnel, and the papers in Colvin & Zaffiro (1972) elaborate on content and procedures for training a wide range of early education personnel (see, particularly, chapters by Peters, Peters & Honig, Peters & Fears). Rather the intent is to suggest: (a) sources from which appropriate and relevant competencies may be derived and (b) content areas to be considered in defining curricula alternatives.

Generally speaking, a competency or performance criteria system focuses its attention on the accomplishment of specified and measurable outcomes. Since the concern is with the outcomes rather than the process of attaining the outcomes, greater flexibility in defining possible means of attainment exists. Inherent in the system is the notion that not all personnel begin a training program at the same place, nor does any one training system, method, or course have an inviolate

place in the procedure. Alternative routes are both encouraged and made possible. The one criteria is that evidence of effectiveness, in terms of producing specified and measurable outcomes, be continuously available. Any route to or procedure or practice of proven effectiveness is acceptable. In short, a competency-based system requires that its user: (a) know what he wants to accomplish, (b) order events in such a way that he has some probability of success, (c) assess the success of the efforts in terms of accomplished outcomes, and (d) revamp the order or content of events if the goals are not met.

With such a conception, the most difficult and critical concern is the specification of the required outcomes. All training is designed to bring about their achievement, with no one training sequence, method, or course considered sacred. The major question then is "How are the competencies to be derived?"

Deriving personnel competencies is not a simple task, nor is it merely an intellectual exercise. There are multiple considerations which may be taken into acccunt. Because of situational variation, differences in training levels, geographical factors, and sociocultural differences in the backgrounds of trainees and prospective clientele, it is impossible to prescribe specific competencies or training program content which would have generalized applicability for all early childhood personnel. However, some guidelines may be offered for defining competency sources and competency domains. At the same time, it should be remembered that a continuous process of retailoring may be required as new needs and insights develop.

Training Components

All training programs for early childhood personnel will have curricula unique to their settings, resources, and purposes. However, several basic components seem to have generality, though their relative emphasis will vary. These include:

1. A liberal education
2. Child development
3. The history and background of early childhood services
4. Interpersonal relations
5. Skills of acquiring new knowledge
6. A basic content area
7. The practice of professional skills

The first five constitute what might be called the core components of the program. These have relevance beyond a particular job description or setting and relate to all positions which involve interaction with young children. The last two involve professional skills and information that are associated with specialty training. One through five are important for the development of possibilities for the horizontal mobility of workers, while six and seven relate to vertical mobility. The interrelationship of these components may be seen in Figure 1 through Figure 5.[2]

A Liberal Education. The arts and humanities and physical and social sciences all contribute to the individual's understanding of the world

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[2]It should be noted that in Figures 1-5 only four levels have been selected for schematic representation and for discussion. Actually, the core represented in Figure 1 could be construed to have a large number of levels or intermediate training steps, for which competency areas, and their relative weightings could be specified.

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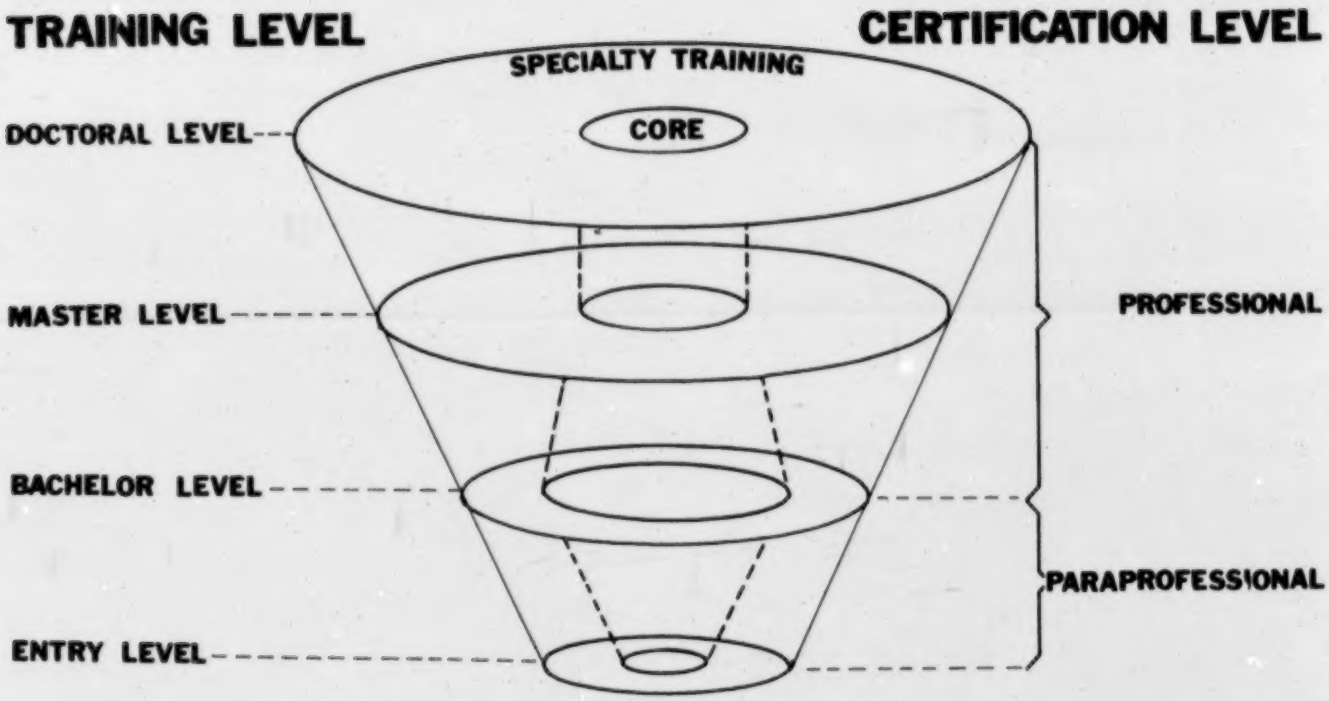

RELATIONSHIP OF EARLY CHILDHOOD CORE TO EMPLOYMENT SPECIALTY TRAINING

FIGURE 1

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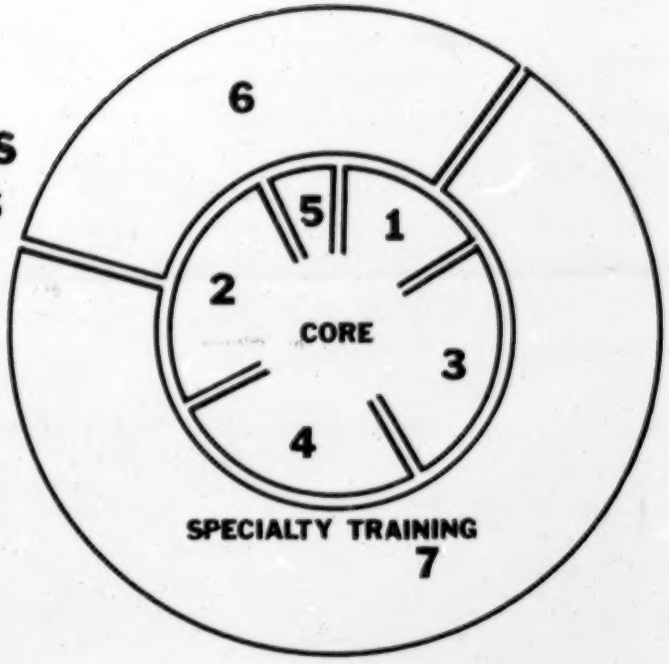
1 LIBERAL EDUCATION
2 CHILD DEVELOPMENT
3 EARLY CHILDHOOD SERVICES
4 INTERPERSONAL RELATIONS
5 RESEARCH METHODS
6 BASIC CONTENT AREA
7 PROFESSIONAL SKILLS



COMPETENCY AREAS – PREPROFESSIONAL LEVEL

FIGURE 2

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1 LIBERAL EDUCATION
2 CHILD DEVELOPMENT
3 EARLY CHILDHOOD SERVICES
4 INTERPERSONAL RELATIONS
5 RESEARCH METHODS
6 BASIC CONTENT AREA
7 PROFESSIONAL SKILLS

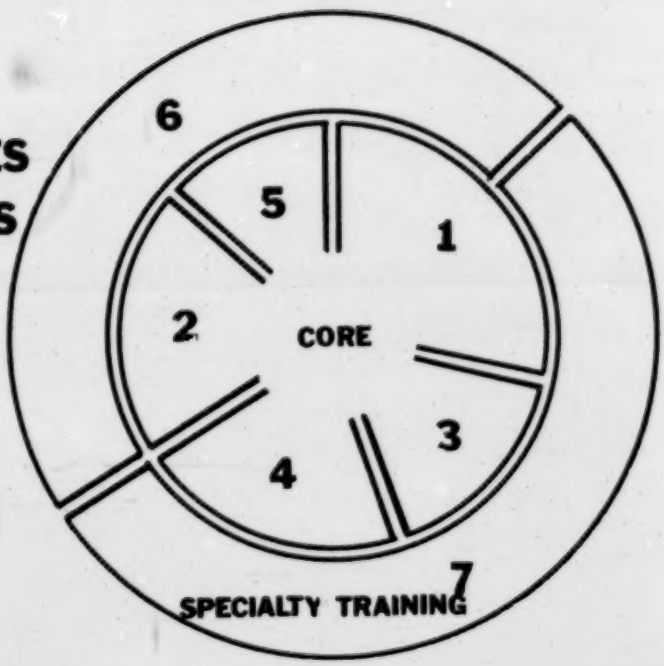

FIGURE 3

COMPETENCY AREAS - BACHELORS LEVEL

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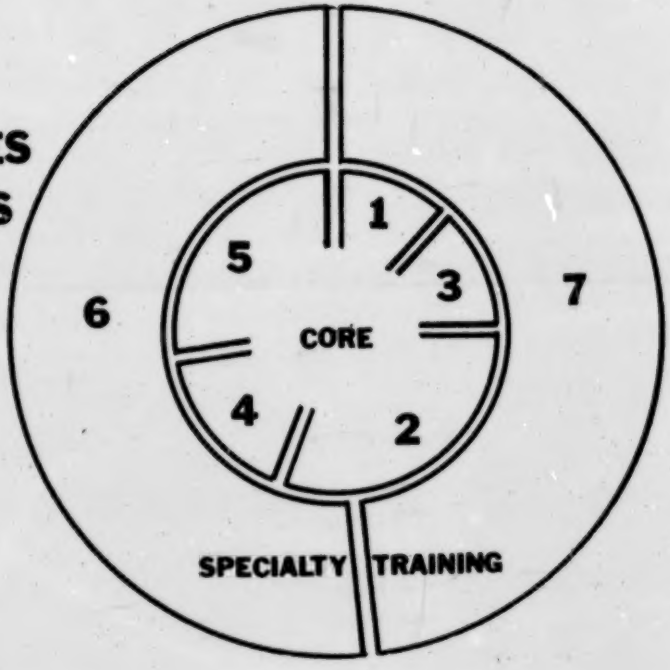
1 LIBERAL EDUCATION
2 CHILD DEVELOPMENT
3 EARLY CHILDHOOD SERVICES
4 INTERPERSONAL RELATIONS
5 RESEARCH METHODS
6 BASIC CONTENT AREA
7 PROFESSIONAL SKILLS



COMPETENCY AREAS – MASTERS LEVEL

FIGURE 4

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1 LIBERAL EDUCATION
2 CHILD DEVELOPMENT
3 EARLY CHILDHOOD SERVICES
4 INTERPERSONAL RELATIONS
5 RESEARCH METHODS
6 CONTENT AREA
7 PROFESSIONAL SKILLS

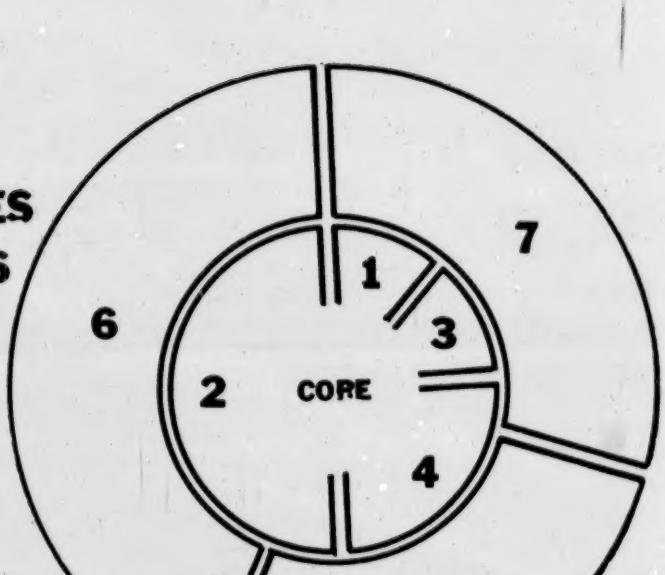

FIGURE 5

COMPETENCY AREAS - DOCTORAL LEVEL

and his place in it. With growing affluence and leisure each individual must have a sense of identity and purpose; each individual also needs the flexibility which comes through active engagement in and understanding of the world in which he lives.

The relative emphasis on providing a liberal education is likely to follow a curvilinear path when both a liberal education and training level are considered together. At the paraprofessional level the concern is primarily upon basic communication skills (reading, writing, and speech) rather than a broad liberal education background. At the baccalaureate level this second component frequently has the major priority. At the graduate level emphasis again diminishes, giving way to more specialized professional training.

Child Development. Child development is usually construed as the interdisciplinary study of children from conception through puberty. That is, many of the classic disciplines provide methods and findings important to the understanding of children as individuals within social, cultural, and physical contexts.

At beginning levels of training fundamental principles and landmarks in the development of children usually suffice. At more advanced levels consideration of alternative theories and their support, specification of developmental trends in the areas of physiological devleopment, intellectual development, emotional development, and social development seem warranted.

Early Childhood Services. As professionals and paraprofessionals in the field of early childhood services, trainees may be expected to represent their field in a variety of social and employment contexts. They therefore

need to understand its goals, background, and future directions. It seems reasonable to include in their training curriculum information concerning the history of early childhood services, the principal programs and methodologies that have been developed, some of the key figures in their field, and the evolutionary trends that may be seen. At the paraprofessional level of training this broad background may be at a conversational or recognition level. At higher levels of training a more comprehensive understanding, including an understanding of the philosophical, theoretical, and social foundations of program development and program diversity may be expected. At more advanced levels the trainee may be expected to fully understand and employ the processes of program development.

Interpersonal Relations. Early childhood personnel must work with people. Movements towards service teams and differentiated staffing place the "teacher" in frequent contact with parents, subordinates, colleagues, supervisors, and community leaders as well as with children. They frequently are required to take on the role of "change agent," facilitating some aspect of the development of other individuals and groups. Recent literature suggests that the skills required for this role can, and perhaps should, be taught (Buchanan, 1971; Dinkmeyer, 1971).

Skills for Acquiring New Knowledge. For the professional the termination of a training program does not mean an end of study. To provide a means for the continued growth and improvement of the field of early childhood, all workers in the field need to be skilled in the means of acquiring new ideas and new information. The skills necessary include those needed in using library resources, reading professional

journals, participating in professional meetings, conducting or participating in research and evaluation. The level of sophistication will vary with training level, but such skills represent an essential part of all programs.

Basic Content Knowledge

Where early childhood personnel are being trained for positions as aides or teachers in the early primary grades of public schools, there is a need for competency in the basic content areas of math, reading, the arts, humanities, and the sciences. Specialty areas may be desirable. In such cases, students may develop programs which accomplish specialty area goals. In training programs concerned with the development of personnel for younger children, this area of curriculum will have different emphasis. That is, the focus will be directed towards the sciences, arts and so forth, and will be geared towards the child's understanding of his physical environment, social environment, and self-expression. For personnel in hospitals or other social service settings, special education, social welfare, or another emphasis may be more important.

Professional Skills. Early childhood personnel need the skills of their profession. Instruction in teaching methods and technology are a part of a teacher's preparation. Such things as the development and utilization of plans and objectives, interactional skills for use with children, and classroom management may be taught through both classroom and practicum experiences. Within a training program they may be geared to the expected employment level of the trainee. That is, trainees who expect to teach young children should be provided with the opportunity

to develop the skills they will need in that role. Trainees who later will be training teachers may be taught skills for working with children, but they should also receive instruction and experience designed to provide them with the skills they will need in teaching teachers. The same principle is true for personnel who will be working with parents, graduate students, and so forth. Personnel being trained for leadership and management roles will need a variety of skills including those of budgeting, planning, and administration.

Within each of these competency areas, and for each level of training, specific competencies must be defined both for the purposes of developing training program curricula and for determining certification. In order to do so, it is necessary to understand some of the major sources from which such competencies may be drawn.

Sources of Competencies

The sources of information which may assist in defining specific competencies within any particular domain are suggested in Figure 6.

Theory. The theoretical orientation adopted by those defining the competency system will play a major role in the overall development process. Particularly, it will influence the priorities assigned to particular goals and the framework used for specifying these goals. It provides a value structure against which inputs from other sources are weighed and a filter through which they are viewed.

A number of alternative theoretical stances are possible. At this time there is no evidence recommending one above the others. However, one potentially useful framework deriyes from the combination of several ideas. When planning personnel are committed to the specification of

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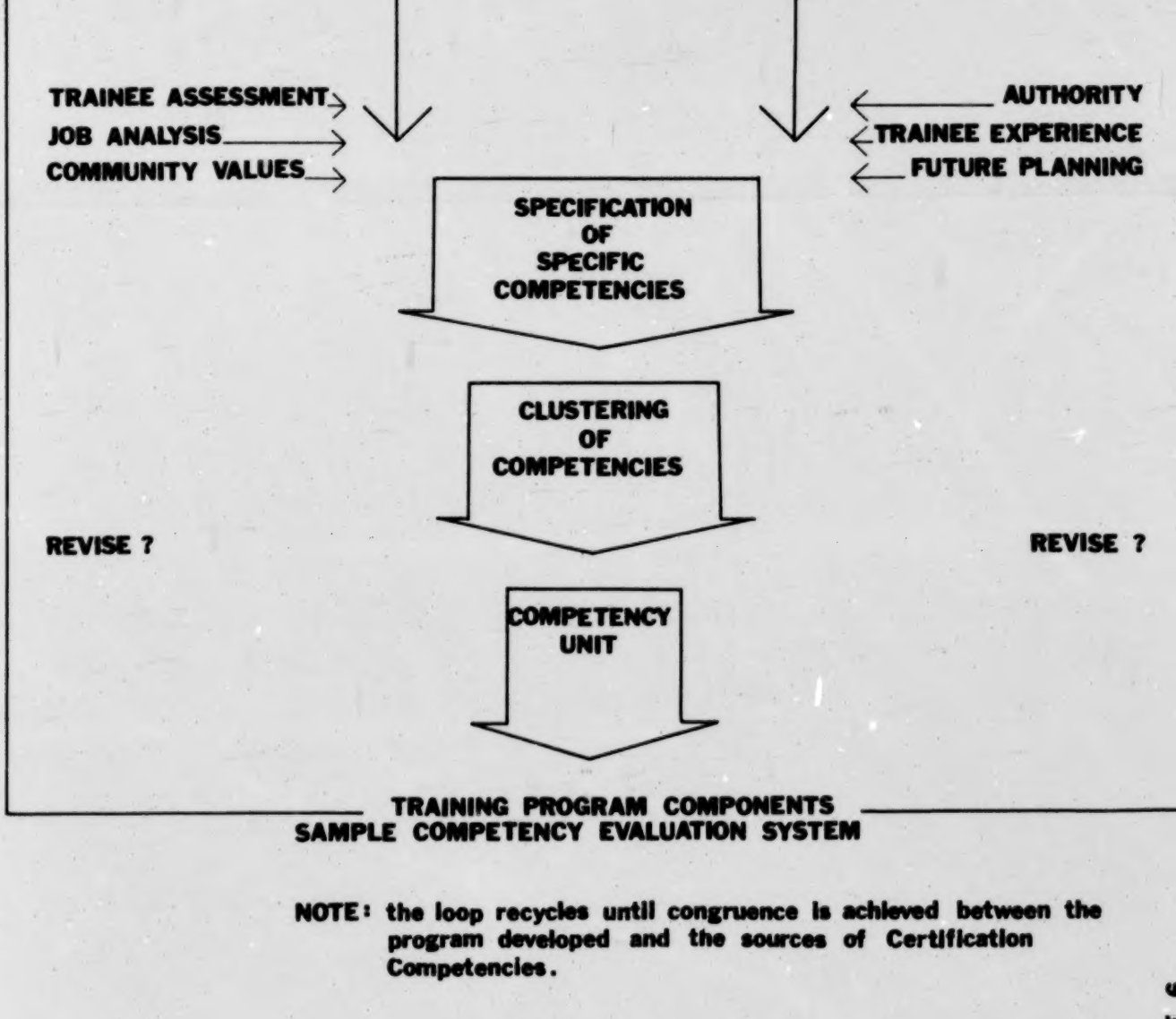

NOTE: the loop recycles until congruence is achieved between the program developed and the sources of Certification Competencies.

SOURCES OF CERTIFICATION COMPETENCIES

FIGURE 6

competencies based upon performance and also support cognitive theoretical orientation toward the developmental process, a system is required which permits a statement of performance criteria tapping multiple levels of thought. Steele (1970), recognizing this need, has presented a method for assessing the intent and practice of instruction utilizing Bloom's (1956) taxonomy of educational objectives for the cognitive domain. The application of this system to the definition of performance criteria for different content areas of a curriculum for early childhood personnel provides a theoretically based framework for stating program goals and certification competencies. A suggestive set of competencies dealing with curriculum models for early childhood education has been derived in this way. It is included in Table 2.

Authority. Existing literature and research findings may provide information useful in defining certification competencies. The concensus of professionals in the field may be consulted for potentially important job skills or knowledge areas. For example, Howard (1968) has attempted to determine the characteristics of exemplary education programs for early childhood teachers. Other sources include: Conant (1963), Koerner (1964), Smith (1962). These reports contain information about areas of training, and to some degree skills, thought important in early education personnel training. They do not specify competencies directly, but may be useful resources for defining areas for which competencies directly, but may be useful resources for defining areas for which competencies should be developed.

Another form of authority that might be considered relates to research on successful teaching. It is difficult, at best, to draw firm conclusions from this broad area. Biddle (1964), Eisner (1963), Flanders (1964),

TABLE 2

COMPETENCIES RELATING TO EARLY CHILDHOOD
EDUCATION PROGRAM MODELS

Memory

1. Identify key figures in curriculum development including: Baer, Bereiter-Engleman, Caldwell, Deutsch, Gordon, Gray, Heffernan, Honig, Kamii, Karner, Lally, Lavatelli, Montessori, Neill, Nimnicht, Painter, Read, Weikart.
2. Identify major early childhood model curricula characteristics including specification of: objectives, special materials, teacher role, target populations, special methods, degree of parental involvement, motivational strategies, and other unique features.
3. Name major reference sources appropriate to each identifiable program type.

Interpretation

1. Compare and contrast major early education curricula models along the major dimensions listed under Memory 2.
2. Suggest likely areas of impact on children's development for each major curriculum for different target populations.
3. Suggest likely future changes and/or modifications of curriculum emphasis for each of three major early childhood program models.
4. Indicate the implications of a specific program modification when given specific research findings.
5. Explain major characteristics of different program models to others less informed.

TABLE 2 (Con't.)

6. Deliver orally or in writing, a presentation outlining the important trends in early education curriculum development when given the basic characteristics of major early childhood education curricula.
7. Given special conditions under which a program has never previously been tried, state likely outcomes.

Application

1. Given a major theory/curriculum prepare: a single concept/skill plan, a weekly or unit plan, and an overall or yearly plan.
2. Given a plan (see Application 1) based on one of the major early education curriculum models, apply with children.
3. Select and apply appropriate curriculum components for a special population.
4. Apply process evaluation to both Application 2 and 3.

Synthesis

1. Develop a totally new program for a specific population by combining components of several programs.
2. Develop a program to alleviate the problem of a specific child by utilizing existing components.
3. Appropriately adapt a specific curriculum to meet the requirements of specific restraints.
4. Generate hypotheses concerning possible extensions of known curricula along any of several dimensions.

TABLE 2 (Con't.)

5. Integrate research and evaluation findings into major curricula and their components.

Evaluation

1. Specify appropriate standards for early childhood education curriculum evaluation for each of major programs.
2. Develop a scheme for the process evaluation of a curriculum component derived from a major program.
3. Critique on evaluational research done on major programs for: practice in relation to objectives, logical consistency, validity and reliability of data.

Formal Analysis

1. Probe and make explicit underlying assumptions of each of three major early childhood education models.
2. Distinguish between components of major programs which have been deduced from theory or induced from empirical evidence.
3. Determine consistency of theory application.
4. Pinpoint inconsistencies in program design (if any).
5. Determine reasonableness of the inferences/generalizations drawn.

and Johnson (1969) maintain that the problem is so complex that no one knows or agrees upon what factors most accurately characterize the competent teacher. When specific concern is directed toward the characteristics of the early childhood teacher, empirical data (but not the contradictions) vanish. As a result Broudy (1969) contends that we may define good teaching any way we like. The developers of the ComField model suggest that:

> With few exceptions, there simply are no tested empirically based instructional principles that speak to the conditions that give rise to specific classes of pupil outcomes for specific kinds of children within specific instructional settings. It is still not possible, for example, to identify explicitly and with confidence the instructional conditions which permit concepts to be mastered, attitudes to be modified, or chronic anxiety to be reduced for various kinds of children in various settings. It is even less possible to specify the conditions for bringing about such outcomes as trust or considerateness of self-understanding. As a consequence, it is not possible to go very far in specifying the knowledge, skills, and sensitivities that prospective teachers need to bring about such conditions. (Burdin & Lanzillotti, 1969, p. 61)

The limitations imposed by this lack of empirical knowledge are real, but they are not overwhelming. It does imply the necessity of proceeding nondogmatically with an information gathering openness.

Trainee Assessment. The term assessment as it is used here does not mean the usual measurement procedures associated with evaluating the worth or success of trainees. Rather the concern here is with utilizing trainee entry behavior as an indicator of terminal objectives or competencies appropriate for individuals.

The possibility of individually tailoring terminal participation competencies to meet individual needs is based upon several assumptions.

First, not all prospective personnel should be planning on employment in the same setting. For example, within paraprofessional training programs some students will find subsequent employment as classroom aides in public school systems, others in day care facilities or child care institutions, and some with Head Start or other programs. Some will continue on to undergraduate education programs. Students from an undergraduate teacher training program will find employment not only in schools but in hospitals, social welfare agencies, or local, state, or federal administrative organizations. Since rapid changes are taking place in the field and in early education, the full range of possibilities is not yet known. The variety of settings thus indicated as possibilities and the desires of students for particular settings may be considered in tailoring the competency of an individual.

Second, the variety of employment activities engaged in by trainees subsequent to their training may be quite broad. They are likely, depending upon the training level involved, to vary from direct services to children (including but not limited to teaching) to administrative or supervisory roles in large field programs; from the training of parents and paraprofessionals to working with doctoral students; from keeping daily records to directing program evaluations; and from recording data to engaging in sophisticated research.

Third, the characteristics of the clientele with which the trainee will subsequently work may differ widely. Examples of variables included here are: age, socioeconomic background, ethnicity, sex, physical and mental health, mother tongue, second language, urban/rural background, the goal orientation of parents, number of siblings or degree of social contact.

Katz (1970) suggests several other dimensions upon which employment may vary. These include varieties of staffing patterns, varieties of organizational structures, variations in degree of community or parent control or influence over activities, varieties of physical plants and climates, and varieties of sponsorship.

With such potential variety it is obvious that not all competencies could or should be met by all early childhood personnel. Opportunities need to be built in for trainees to have some role in the selection of certification competencies relevant for their employment objectives.

It also should be recognized that not all prospective personnel share common values, backgrounds, and experiences. Not all are motivated by the same system of rewards. Assessment of these differences is essential if certification programs are to be developed which will capitalize on the resources of language and cultural pluralism of this nation.

Trainee Experience. Trainee experience includes feedback from certified personnel in the field. Certified personnel, after they have moved into the world of employment, are in an excellent position to illuminate "gaps" in a training program or in the certification standards. The first time they run into a situation for which they have not been adequately prepared they may provide new objectives, new competency statements, and even new areas of curriculum that might well be included.

One rather vivid example will make the point. One recent graduate from a reputable baccalaureate-level program of early education took a position as head teacher and administrator of a day care center. She had almost all the skills required of the position--almost. She had no training in or experience with bookkeeping, accounting, or budget management. No one knew this until the creditors came banging on the day care

center's door. Not knowing what to do, and apparently being ashamed or afraid to ask, she had maintained a neat drawer full of invoices--none of which had been paid. This incident, although probably atypical, suggests an addition to the training program from which she was graduated and a competency which should be assessed in all seeking and obtaining such a position.

Job Analysis. Job analysis of perspective employment outlets provide another major source of information concerning the content of training programs. Perspective employers may be requested to specify in some detail the kinds of skills and experience that they would hope a new employee would have.

Various task analyses may also prove necessary. Task or job analysis in this sense requires the identification and description of the minimal competencies required of a position. Although ways of conducting task analysis or the identification of prerequisite skills have been used extensively in industry, they are not well established in the field of education. Several empirical and logical strategies have been tried (McNeil, 1969; Gagné & Paradise, 1961; Miller, 1962), but, as in the analysis of teacher behavior, the results have not been particularly helpful at this point. The ten comprehensive curriculum models for elementary education personnel may yet prove a notable exception. (Burden & Lanzillotti, 1969)

Community Values. Most aspects of early childhood programs are heavily bound to the culture and community. Yet, some training programs developed in the isolated university or campus milieu remain totally unresponsive to any "real" community needs. Middle-class students are

taught how to teach "average" children and are given practice-teaching experience with small groups of university offspring in idealic laboratory schools. Little concern is directed towards the needs of culturally different children or the necessity of working in settings which demand interaction with parents with diverse linguistic and cultural backgrounds. Such programs produce teachers who are ineffectual, or who may be harmful when employed in communities where the early childhood program needs are the greatest. Certification requirements should reflect the competencies necessary for working in such communities. At the same time the community people may, as the ultimate consumers, provide an important and clear statement of the performances they expect from early childhood personnel at various levels.

Future Planning. Many people would agree that education is preparation for the future. The huge investments we make in terms of time, money, and human resources in the preparation of early childhood professionals and paraprofessionals is not a short-term venture. While striving for immediate impact, it is clearly desired that each and every early childhood person have a long and productive career.

The person certified in 1975 at age 20 will be but 45 in the year 2000. Assuming a productive career until age 65, that person will be still working with children in the year 2020. The five-year-old in an early childhood program in 1975 may be reasonably expected to be alive in the year 2050. What in the certification procedure taps competencies useful and important across this expanse of time? Questions such as this one imply that planners must take the future into account more than is typical now. Alternative plans, policies, and programs must be weighed

against the most systematic conjectures that can be developed about the future. Also implied is the notion that factors which seem decisive in the decision-making process in the current state of affairs may not be significant when viewed with a future perspective (Weaver, 1971).

Developing the Total System

Once the areas or domains of competency have been defined for each training level, and the relative emphasis of each area has been decided, specific competencies may be derived from the six sources suggested in the preceding section of this report. While certainly not an easy task, such a derivation is a possible one. The resulting list of competencies within each area or domain may then be grouped or clustered on the basis of logical relations, empirical evidence or convenience. That is, those specific competencies which for one reason or another appear to go together may be clustered into units. The competencies listed in Table 2 provide an example of what one such unit might look like.

Competency units have two basic uses. First, by providing specification of the desired outcomes of training or experience, they may serve to guide the development of training program components or modules. A series of such modules, each addressing a competency unit, may be integrated into a course or workshop structure. Several courses, workshops, or other experiences may be required to incorporate the competency units into a total domain of competencies (liberal education, child development, etc.).

Second, the competency unit is the sampling unit for devising evaluation and/or certification systems. That is, for purposes of the

evaluation of an overall training program (as compared to a training component) or for evaluating the competency of an individual (certification procedure), it is uneconomical to attempt to assess all specified competencies. It is therefore necessary to design a procedure for sampling from the total set of competencies in reasonably intelligent ways. The procedure suggested here would be to sample one or more competencies (at random) from each competency unit within each competency domain. Since the number of competency units within each competency domain would roughly parallel, or be proportional to, the emphasis placed on each domain at each training level, the sampled competencies would reflect priorities of the training or certification level.

It should be noted that for certification purposes the entire system could be computerized with the total range of competencies stored by certification level, domain, and unit. Computerized selection could be developed so that selection would further reflect the employment setting, the community or the employment specialty. Within these constraints selection of specific competencies to be assessed would be random. In this manner certification could be adapted to the individual and the specific situation. An individual could be certified for a range of positions (levels and settings) but blanket certification (which is really rather meaningless anyway) would be unlikely.

Failure of a number of individuals to meet the sampled certification competencies would reflect upon the value or efficacy of the training program. Such an outcome would be fedback into the training system for revision and improvement. Particular attention would be given to the training components covering the competencies missed. Feedback on the

actual job performance of certified personnel would suggest revisions in competency units or assessment procedures.

A system of training program development and personnel certification developed along these guidelines would:

1. Permit the certification of all early childhood personnel to be centralized in one agency.
2. Permit, with relative ease, the horizontal and vertical mobility of early childhood personnel.
3. Orient certification requirements towards the particular level, clientele, and setting of actual employment.
4. Allow for individual differences in personnel.
5. Make all requirements relevant to employment performance.
6. Allow for the input of communities into certification requirements.
7. Make certification requirements responsive to changes in the employment scene and to the on-the-job success of certified personnel.
8. Provide a reasonable basis for the recurrent certification or renewal of certification of personnel.

As such, the system proposed would overcome all the major limitations of the present system and should be given serious consideration. The undertaking would be a large one.

A few words of caution should also be included. The schematic presentation given here has skimmed over the very tedious and difficult problem of actually defining the relevant competencies. It has also

side-stepped the difficult assessment problems implied in evaluating an individual's competency. Further, there is the judgmental problem of deciding what constitutes the minimal allowable performance level. That is, how competent must a person be before he is minimally competent? Each of these problems would need to be addressed before a workable system could be developed. Many of them would require empirical research; all would require time.

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